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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/680,840
Filing Date: October 07, 2003
Appellant(s): RIFFER, DAVID B.

Robert C. Collins
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3 July 2006 appealing from the Office action mailed 7 February 2006.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: The reference to Hundt (USPN 3147874) was used only as evidence for the motivation to combine the cited references in the final rejection of Claims 1, 24, and 32.

Independent Claims 1 and 32 are rejected over the combination of Mori 4,312,824 and Mehra 5,700,412 with Hundt 3,147,874 as evidence. Independent Claim 24 is rejected over Mori 4,312,824, Mehra 5,700,412, and Schrenk 5,380,479, with Hundt 3,147,874 as evidence.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,312,824	MORI et al.	1-1982

5,700,412	MEHRA et al.	12-1997
5,380,479	SCHRENK et al.	1-1995
3,147,874	HUNDT et al.	9-1964

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Double Patenting

The rejections of **Claims 1, 5, 8-10, 12-14, 21-28, 30, 31 32, 40-42, and 44-46** set forth previously under this section are withdrawn in view of the terminal disclaimer filed 3 July 2006.

Claim Rejections - 35 USC § 103

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (USPN 4312824) in view of Mehra (USPN 5700412) as evidenced by Hundt (USPN 3147874).

As to Claim 1, Mori teaches the following:

a) providing a plastic cap that includes a base and peripheral skirt defining a cap interior (Fig. 4, Item 1)

b) placing within the cap interior, on the base, a mold charge that includes a matrix polymer (6:11-31)

c) compression molding the mold charge in situ within the cap interior against the base to form a liner on the base having layers of barrier polymer alternating with layers of matrix polymer material (this aspect is inherent because multiple layers would have been formed by the compression molding, 9:34-39)

Mori appears to be silent to the layers of barrier polymer and compatibilizer. Hundt provides evidence that multilayer barriers, fabricated by extrusion (5:30-31 and 3:45-48), were well known in the art in order to prevent gas leakage (1:14-23). Additionally, Mehra teaches layers of barrier and matrix (3:30-46) resisting transmission of gas and water vapor (inherent in Mehtra's method), in addition to a compatibilizer material comprising a thermoplastic resin for tying the matrix polymer material to the barrier polymer by reactive bonds or non-reactive adhesion mechanisms (4:23-51). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Mehra into that of Mori in view of Hundt's teaching that it was known and desirable to provide multilayer crown closures that are impervious to gas leakage (1:14-23 and 1:43-50).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (USPN 4312824) in view of Mehra (USPN 5700412) and Schrenk (USPN 5380479) as evidenced by Hundt (USPN 3147874).

As to Claim 24, Mori teaches:

c) providing a plastic cap including a base and a peripheral skirt defining an interior (Fig. 4, Item 1)

d) placing a mold charge pellet within the cap (6:11-31)

e) compression molding the mold charge pellet in situ within the cap (9:34-39)

Mori appears to be silent to steps a, b, and the continuous layers of barrier polymer material. Hundt provides evidence that multilayer barriers, fabricated by extrusion (5:30-31 and 3:45-48), were well known in the art in order to prevent gas leakage (1:14-23). However, the following aspects were also well known in the art for the following reasons:

Schrenk teaches:

a) extruding plastic mold charge material that consists essentially of:

1) continuous (5:10) layers of barrier polymer material to resist gas transmission, totaling at least nine alternating layers (18:59-60).

2) compatibilizer material comprising thermoplastic resin, the compatibilizer being disposed in the matrix polymer or barrier polymer layers, or in separate layers between the matrix and barrier (15:65-16:11).

Mehra teaches:

b) severing a mold charge pellet from the mold charge material extruded (See Mehra 7:50-60 and 3:14-29)

1. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Schrenk and Mehra into that of Mori in view of Hundt's teaching that it was known and desirable to provide multilayer crown closures that are impervious to gas leakage (1:14-23 and 1:43-50), and because doing so would improve the barrier properties of the multilayer (Schrenk 12:34-39).

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (USPN 4312824) in view of Mehra (USPN 5700412) as evidenced by Hundt (USPN 3147874).

As to Claim 32, Mori teaches compression molding a pellet to form a liner disk (7:62), but appears to be silent to the other claimed limitations. However, Mehra teaches:

a) extruding a pellet that consists essentially of a multiplicity of alternating layers of matrix polymer material and barrier polymer material (3:14-30)

b) orienting of the layers parallel would be obvious in the combined method in order to capitalize on the barrier properties.

Hundt provides evidence that multilayer barriers, fabricated by extrusion (5:30-31 and 3:45-48), were well known in the art in order to prevent gas leakage (1:14-23). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Mehra into that of Mori in view of Hundt's teaching that it was known and desirable to provide multilayer crown closures that are impervious to gas leakage (1:14-23 and 1:43-50).

(10) Response to Argument

In response to the rejection of Claim 1, Appellant argues on page 6 that there is nothing to suggest that the discrete particle or platelet-forming action involved in such a stretching would or could take place in compression molding, and thus there is no basis for combination except in hindsight. Appellant further argues on page 7 that in the method of Mori, in-situ liner compression molding is accomplished by severing a charge or extruded material and placing the charge within a preformed closure shell and contacting it with a male die element, but that this would not produce material flow to cause a platelet-forming action.

The Examiner responds firstly that the Appellant makes the following concession on Page 7, lines 4-7: "As disclosed in Mori, as well as in the various patents referenced in the application text, in-situ liner compression molding is accomplished by severing a charge of extruded material, placing the charge within a preformed closure shell, and then bringing a male die element into contact with the charge material." The Examiner notes that these are the method steps sought in the appealed claim, the only difference being drawn to the composition or layered structure of the "mold charge". Thus, Appellant appears to assert that the method is patentably distinct because of its use of a different starting material in a process that is conceded to be conventional. However, it has already been held that use of a different starting material in an old process is not patentable. See *In re Durden, Jr., et al.* 226 USPQ 359 ("The issue to be decided is whether a chemical process, otherwise obvious, is patentable *because* either or both the specific starting material employed and the product obtained, are novel and unobvious."). In this case, the Examiner asserts that Appellant's claim to a new starting material in an old process does not patentably distinguish the instant claims.

However, in response to the arguments, the Examiner asserts that Mehra teaches that the act of extruding the melted blend creates the platelets, which are interpreted to be alternating layers of matrix and barrier polymer materials (7:65-8:5). Appellant asserts that the compression of Mori would not cause the "stretching" into the platelets. However, Mehra provides a charge of material by extrusion which already has the platelet structure (8:5 and 7:67-8:1). Additionally, Mori teaches using a molten pellet and a heated press mold to avoid molecular orientation by plastic deformation (4:10-25), which is different than molten flow. The Examiner asserts that Mehra's teaching of extruding or pressing between platents (8:5) is also suggestive of the combination with Mori, as Mori provides both extrusion and pressing the polymer between platens.

In response to the rejection of Claim 1, Appellant further argues that Mehra provides a "heterogeneous blend" of discrete particles and is not remotely related to providing a mold charge that includes "layers of matrix polymer alternating with layers of barrier polymer material".

The Examiner responds that Mehra teaches that the act of extruding the melted blend creates the platelets, which are interpreted to be alternating layers of matrix and barrier polymer materials (7:65-8:5). The extruded blend from Mehra used in the method of Mori would maintain the platelet structure. In the alternative, Mori compresses a molten melt between platens to cause flow to the periphery. Mehra teaches that when compressing a molten flow, a platelet structure results.

In response to the rejection of Claim 1, Appellant further argues that it is unclear what Hundt has to do with the present application, namely a method of making a plastic closure. There is no disclosure or suggestion in Hundt that these disks of diverse materials should be formed by compression molding.

The Examiner responds that Hundt provides evidence that the ordinary artisan would have been motivated to combine the methods in order to provide barrier properties into bottle closures. Hundt teaches that barrier materials (which Mehra provides) are obviously desirable in bottle closures (as in the method of Mori). However, additional motivation may also be found. For instance, Mori suggests polyethylene mixtures (6:21-31), and Mehra provides polyethylene mixtures (3:30-34).

In response to the rejection of Claim 1, Appellant further argues that there is no disclosure or suggestion in Mori, Mehra, or Hundt that would lead one of ordinary skill to the subject matter of Claim 1.

The Examiner responds that Hundt provides evidence that the ordinary artisan would have been motivated to combine the methods in order to provide barrier properties into bottle closures. Hundt teaches that barrier materials (which Mehra provides) are obviously desirable in bottle closures (as in the method of Mori). However, additional motivation may also be found without the reference to Hundt. For instance, Mori suggests polyethylene mixtures (6:21-31), and Mehra provides polyethylene mixtures (3:30-34).

In response to the rejection of Claim 24, Appellant argues that Claim 24 requires "continuous layers" of matrix and barrier polymer materials, and that this is the antithesis of Mehra's disclosure.

The Examiner responds firstly that the Appellant makes the following concession on Page 7, lines 4-7: "As disclosed in Mori, as well as in the various patents referenced in the application text, in-situ liner compression molding is accomplished by severing a charge of extruded material, placing the charge within a preformed closure shell, and then bringing a male die element into contact with the charge material." The Examiner notes that these are the method steps sought in the appealed claim, the only difference being drawn to the composition or layered structure of the "mold charge". Thus, Appellant appears to assert that the method is patentably distinct because of its use of a different starting material in a process that is conceded to be conventional. However, it has already been held that use of a different starting material in an old process is not patentable. See *In re Durden, Jr., et al.* 226 USPQ 359 ("The issue to be decided is whether a chemical process, otherwise obvious, is patentable *because* either or both the specific starting material employed and the product obtained, are novel and unobvious."). In this case, the Examiner asserts that Appellant's claim to a new starting material in an old process does not patentably distinguish the instant claims.

Additionally, it should be noted that Mehra was not relied upon for the "continuous layers", which were instead provided by Shrenk. Mehra provides teaching that it is conventional to sever a mold charge pellet for the extruded mold charge material, as claimed in step (b) of Claim 24.

In response to the rejection of Claim 24, Appellant argues that Schrenk is not suggestive of compression molding barrier liners from multilayer charge pellets, and has nothing to do with Mehra reference, which uses heterogeneous blends involving discrete particles or platelets.

The Examiner responds that Hundt provides motivation to make the combination, namely that it is desirable to provide barrier properties (as found in the continuous barrier layers of Schrenk) into a bottle closure (as in the method of Mori).

In response to the rejection of Claim 32, Appellant argues that the claim recites a pellet that consists essentially of alternating layers of matrix and barrier polymer and compression molding the pellet to form a liner disk. Appellant further argues that Mehra does not disclose or suggest extruding a pellet that "consists essentially of" a multiplicity of alternating layers. Appellant argues that Mehra coextrudes the strands, cuts the strands into pellets, heterogeneously blends with polyolefin matrix material and the blend is stretched to produce the heterogeneous film product with discrete particles or platelets. Appellant further argues that there is no disclosure or suggestion of extruding a pellet that consists essentially of a multiplicity of alternating layers of matrix and barrier polymers.

The Examiner responds that it should be noted that in the claim, it is only the structure of the pellet that "consists essentially of" the recited layers. This transitional language does not apply to the method of making the pellet, and Mehra's polymer falls within the scope of the claimed structure and transitional language (7:12-19 and 8:5). The platelets in Mehra's extruded pellet (8:5 and 7:12-19) are interpreted to be "alternating layers". Appellant's remarks do not point out any chemical additives or structural elements that fall outside the scope of the claimed composition and transitional language.

Additionally, the Examiner notes that the Appellant makes the following concession on Page 7, lines 4-7: "As disclosed in Mori, as well as in the various patents referenced in the application text, in-situ liner compression molding is accomplished by severing a charge of extruded material, placing the charge within a preformed closure shell, and then bringing a male die element into contact with the charge material." The Examiner notes that these are the method steps sought in the appealed claim, the only difference being drawn to the composition or layered structure of the pellet. Thus, Appellant appears to assert that the method is patentably distinct because of its use of a different starting material in a process that is conceded to be conventional. However, it has already been held that use of a different starting material in an old process is not patentable. See *In re Durden, Jr., et al.* 226 USPQ 359 ("The issue to be decided is whether a chemical process, otherwise obvious, is patentable *because* either or both the specific starting material employed and the product obtained, are novel and unobvious."). In this case, the Examiner asserts that Appellant's claim to a new starting material in an old process does not patentably distinguish the instant claims.

In response to the rejection of Claim 32, Appellant further argues that Hundt merely teaches a closure that includes disks of paper, PVC, and polyolefin.

The Examiner responds that Hundt provides motivation for incorporating barrier materials into a bottle closure, and suggests the combination which Appellant has claimed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Matthew J. Daniels

Conferees:

Christina Johnson (SPE GAU 1732)

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